



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, ILLINOIS 60604**

**DATE:** OCT 08 2019

**SUBJECT:** CLEAN AIR ACT INSPECTION REPORT  
Sims Metal Management, Chicago, Illinois

**FROM:** Vicky Mei, Environmental Engineer  
AECAB (IL/IN)

**THRU:** Nathan Frank, Section Chief  
AECAB (IL/IN)

**TO:** File

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**BASIC INFORMATION**

**Facility Name:** Sims Metal Management

**Facility Location:** 2500 S. Paulina Street, Chicago, Illinois

**Date of Inspection:** September 20, 2019

**EPA Inspector:**

1. Vicky Mei, Environmental Engineer

**Other Attendees**

1. Debbie Hays, Central Region SHEC Director, Sims Metal Management (Sims)
2. Richard Trzupek, Principal Consultant, Trinity Consultants
3. David Dempsy, Managing Consultant, Trinity Consultants
4. George Malamis, General Manager, Sims
5. Sam Flores, Plant Manager, Sims
6. Eric Ehlers, Director of Field Operations, Mostardi-Platt
7. Jeremy Carlson, Mostardi-Platt
8. Dan Kossack, Mostardi-Platt
9. Jeff Gross, Mostardi-Platt
10. Rick Sollars, Mostardi-Platt

**Contact Email Address:** [Debbie.Hays@simsmm.com](mailto:Debbie.Hays@simsmm.com)

**Purpose of Inspection:** Emissions Test Observation

**Facility Type:** Metal Shredding and Recycling

**Arrival Time:** 7:45 AM

**Departure Time:** 3:30 PM

**Inspection Type:**

- ☐ Unannounced Inspection
- ☒ Announced Inspection

**OPENING CONFERENCE**

- ☒ Credentials Presented
- ☒ CBI warning to facility provided

The following information was obtained verbally from Sims, Trinity Consultants, or Mostardi-Platt staff unless otherwise noted.

**Process Description:**

Sims utilizes a hammermill shredder to shred sheet iron and end-of-life vehicles (ELV) and sort the shredded metals for recycling. For the purposes of the stack test required by Sims Administrative Compliance Order, dated December 17, 2018, Sims installed a temporary enclosure around the under-mill oscillator (UMO) with overlapping rubber sheeting around the UMO, metal sheeting above the mill, and vacuum pulling emissions through the enclosure to ducting with emission testing probes for sample collection and monitoring of particulate matter, volatile organic compounds (VOC), and metals from the mill. Since the initial test on September 5, 2019, Sims added sheeting to an opening along the foundation wall on the south side of the shredder. Any captured particles and objects in the air were discharged through the ducting to a pod with openings that were covered by expanded metal, a mesh filter, and water from a misting hose on the outside of the exhaust point. The fan was operated at 50 hertz during all three stack test runs.

**Staff Interview:**

Sampling and testing occasionally stopped between about zero to three times per run to clean out and/or replace the probes when particles clogged the probes. 300 tons of ELV and sheet metal were consumed during each run. The total hydrocarbon (THC) ranges were very rough estimates, provided at a glance by Mostardi-Platt staff.

Run	#1	#2	#3
Estimated start time	8:54 AM	11:27 AM	1:45 PM
Estimated end time	10:37 AM	1:14 PM	3:29 PM
Estimated THC range	20 – 200 ppm, with a 1000+ ppm spike near the end of the run	17 – 180 ppm	Sporadic spikes in emissions occurred during run.
Estimated flow rate	40,000 – 45,000 standard cubic feet per minute (scfm)	47,000 scfm	47,000 scfm

### **TOUR INFORMATION**

**EPA toured the facility:** Yes

#### **Data Collected and Observations:**

Visible emissions and emissions imaged via the FLIR camera were seen during all three runs. A significant spike in THC concentration occurred near the end of Run #1, as seen in Video #12 (see Appendix A). During Run #2, significantly more emissions were uncaptured, as seen via FLIR camera, (see Videos #13-21 of Appendix A). Videos captured during Run #3 showed sporadic spikes in emissions imaged via the FLIR camera. During Run #3, the wind was blowing west, and the southeast view of the mill provided a better vantage point for observations.

**Photos and/or Videos:** were taken during the inspection.

**Field Measurements:** were taken during this inspection.

Field Measurements, using EPA Methods 1, 2, 3, 4, 5, 25, and 29 were performed by Mostardi Platt technicians during the course of the emissions testing.

### **SIGNATURES**

Report Author:  Date: 10/4/2019

Section Chief:  Date: 10/8/19

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**APPENDICES AND ATTACHMENTS**

*I.* Appendix A: Digital Image Log

**Facility Name:** Sims Metal Management  
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**Date of Inspection:** September 20, 2019

#### APPENDIX A: DIGITAL IMAGE LOG

<b>1. Inspector Name:</b> Vicky Mei	<b>2. Date(s) of Inspection:</b> September 20, 2019
<b>3. Company/Facility Name:</b> Sims Metal Management	<b>4. Address, City, State:</b> 2500 S. Paulina Street, Chicago, Illinois
<b>5. Number of Images:</b> 38	<b>6. Archival Record Location:</b> Two USBs, labelled "Sims 09/20/2019 FLIR videos(1) and photos" and "Sims 09/20/2019 FLIR videos(2)"

#### Digital Photos

Image Number	File Name	Date and Time (CST)	Run	Description of Image
1	P9200001.JPG	9/20/2019 9:32 AM	#1	Visible emissions from top of mill (northwest view); photo taken in between FLIR camera videos #5 and #6.
2	P9200002.JPG	9/20/2019 9:33 AM	#1	Visible emission from the middle sorter chute (northwest view).
3	P9200003.JPG	9/20/2019 9:33 AM	#1	Visible emission from the middle sorter chute (northwest view).
4	P9200004.JPG	9/20/2019 9:33 AM	#1	Visible emissions from top of mill (northwest view).

#### FLIR Videos

Incorrect date and time camera setting but accurate relative time increments\*

Image Number	File Name	Date and Time (CST) *	Run	Description of Image
1	MOV_2558.mp4	12/31/1999 23:42	#1	Prematurely ended video (east view).
2	MOV_2559.mp4	1/1/2000 0:37	#1	Entire process (east view).
3	MOV_2560.mp4	1/1/2000 0:41	#1	Prematurely ended video; digital video only; inlet feed to mill (east view); some emissions and periodic VOC plumes.
4	MOV_2561.mp4	1/1/2000 0:45	#1	Inlet feed to mill (east view); some emissions and periodic VOC plumes.
5	MOV_2562.mp4	1/1/2000 0:56	#1	Inlet feed to mill (east view); some emissions and periodic VOC plumes.

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6	MOV_2563.mp4	1/1/2000 1:04	#1	Top of mill enclosure (northwest view); periodic VOC plumes from mill; visible steam from middle sorter chute opening.
7	MOV_2564.mp4	1/1/2000 1:13	#1	Top of mill enclosure (northwest view).
8	MOV_2565.mp4	1/1/2000 1:26	#1	Top of mill enclosure (northwest view).
9	MOV_2566.mp4	1/1/2000 1:29	#1	Top of mill enclosure (northwest view); with inverted polarity auto camera mode and high-sensitivity mode.
10	MOV_2567.mp4	1/1/2000 1:31	#1	Top of mill enclosure (northwest view).
11	MOV_2568.mp4	1/1/2000 1:37	#1	Top of mill enclosure (northwest view); alternating between auto camera mode and high-sensitivity mode.
12	MOV_2569.mp4	1/1/2000 1:47	#1	End of sorter chute; emissions seen; during near the end of Run #1 and may be during the 1000+ ppm THC spike.
13	MOV_2570.mp4	1/1/2000 3:12	#2	Top of mill (northeast view); significant amounts of emissions seen.
14	MOV_2571.mp4	1/1/2000 3:29	#2	Top of mill (northeast view); significant amounts of emissions seen.
15	MOV_2572.mp4	1/1/2000 3:37	#2	Top of mill (northeast view); significant amounts of emissions seen.
16	MOV_2573.mp4	1/1/2000 3:47	#2	Top of mill (northwest view).
17	MOV_2574.mp4	1/1/2000 3:51	#2	Top of mill (northwest view); significant amounts of emissions seen.
18	MOV_2575.mp4	1/1/2000 4:02	#2	Top of mill (northwest view); emissions seen.
19	MOV_2576.mp4	1/1/2000 4:15	#2	Top of mill (northeast view); emissions seen.
20	MOV_2577.mp4	1/1/2000 4:20	#2	Top of mill (northeast view); emissions seen.
21	MOV_2578.mp4	1/1/2000 4:26	#2	Top of mill (northeast view); emissions seen.
22	MOV_2579.mp4	1/1/2000 4:29	#2	Pod discharge point, sorter chutes, top of mill (east view).
23	MOV_2580.mp4	1/1/2000 4:39	#2	Inlet feed to mill (east view); periodic emissions.
24	MOV_2581.mp4	1/1/2000 5:38	#3	Inlet feed to mill (east view).
25	MOV_2582.mp4	1/1/2000 5:42	#3	Top of mill and sorter chutes (northeast view).

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26	MOV_2583.mp4	1/1/2000 5:44	#3	Top of mill and sorter chutes (northeast view from further south).
27	MOV_2584.mp4	1/1/2000 5:52	#3	Top of mill (northwest view).
28	MOV_2585.mp4	1/1/2000 5:58	#3	Top of mill (northwest view); wind was blowing west; poor view.
29	MOV_2586.mp4	1/1/2000 6:03	#3	Top of mill, sorter chutes, sorted metals outlets (northwest view); wind was blowing west; poor view.
30	MOV_2587.mp4	1/1/2000 6:10	#3	Accidental blank video with lens cap on.
31	MOV_2588.mp4	1/1/2000 6:13	#3	Top of mill and sorter chutes (northeast view).
32	MOV_2589.mp4	1/1/2000 6:17	#3	Pod discharge point, sorter chutes, top of mill (east view).
33	MOV_2590.mp4	1/1/2000 6:24	#3	Inlet chute to mill (southeast view); wind blowing west; emissions seen.
34	MOV_2591.mp4	1/1/2000 6:29	#3	Inlet chute to mill (southeast view); wind blowing west; emissions seen.